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Flying Operations

T-43 OPERATIONS PROCEDURES

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFD 11-2, *Aircraft Rules and Procedures*, and AFI 11-202, Volume 3, *General Flight Rules*. Along with its complementary **Chapter 6** (Local Operating Procedures), this instruction prescribes standard operational procedures to be used by all aircrew operating Air Force T-43A aircraft. (This AFI does not apply to the Air National Guard or Air Force Reserve Command.) File a copy of all approved waivers with this instruction. **Attachment 1** contains a glossary of references and supporting information used in this publication.

See paragraph **1.1** for guidance on submitting comments and suggesting improvements to this instruction. Maintain and dispose of records created as a result of processes prescribed in this publication in accordance with AFMAN 37-139, *Records Disposition Schedule*.

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Chapter 1

GENERAL INFORMATION

1.1. Recommended Changes. Submit suggested improvements to this instruction on AF Form 847, **Recommendation for Change of Publication**, to the parent MAJCOM through standardization/evaluation (stan/eval) channels. Parent MAJCOMs will forward approved recommendations through HQ AETC/DOFV. HQ AETC/DOFV will forward interim changes (IC) and revisions to this AFI to HQ AFFSA/XOF for HQ USAF/XO approval.

1.2. Deviations and Waivers:

1.2.1. Do not deviate from the policies and guidance in this AFI except for safety reasons or when it is necessary to protect the crew or aircraft from a situation not covered by this AFI and immediate action is required. In this case, the aircraft commander has ultimate authority and responsibility for the course of action to be taken. Report all deviations or exceptions without waiver through channels to MAJCOM OPR.

1.2.2. Unless otherwise directed in this AFI, waiver authority for the contents of this document is the MAJCOM director of operations (DO). If necessary, waiver authority may be delegated to local commanders for specific areas of this document through the appropriate MAJCOM supplement. MAJCOMs will forward informational copies of waivers to the lead command (HQ AETC/DOF).

1.3. Supplements:

1.3.1. Each MAJCOM or operational theater may supplement this AFI, but the supplement will not be less restrictive than or contradict the AFI. MAJCOM DOs may initiate long-term waiver requests to the basic document, specifying the long-term waiver approval authority, its date, and the expiration date in the appropriate MAJCOM supplement. (Limit supplement information to unique requirements only.)

1.3.2. Prior to publication, units will send one copy of their supplement to their parent MAJCOM OPR for validation through their appropriate numbered Air Force (NAF) for coordination. Send final copies to HQ AETC/DOF, the parent MAJCOM, and the appropriate NAF.

1.4. Definitions. The explanation or definition of terms and abbreviations commonly used in the aviation community can be found in the *Federal Aviation Regulation (FAR), Part 1*, and *DoD Flight Information Publication (FLIP)*, General Planning, Chapter 2.

Chapter 2

MISSION PLANNING

2.1. Aircraft Commander Responsibilities and Authority. An aircraft commander is designated for all flights on the flight authorizations in accordance with AFI 11-401, *Flight Management*, and applicable MAJCOM supplement. Each aircraft commander is:

- 2.1.1. In command of all persons aboard the aircraft.
- 2.1.2. Responsible for the welfare of the crew and the safe accomplishment of the mission.
- 2.1.3. Vested with the authority necessary to manage crew resources and accomplish the mission.
- 2.1.4. Responsible for mission planning. (Mission planning tasks may be accomplished by other crewmembers.)

2.2. Training Mission Commanders (TMC). TMCs are the primary navigator instructors, and they are responsible for all matters concerning navigator student training. They will make all navigator training decisions while airborne.

2.3. Weather Minimums:

2.3.1. Takeoff Minimums. Aircrews will not take off unless prevailing ceiling and visibility are at or above the lowest suitable approach minimums for the departure field. In addition, the crosswind component must be less than the maximum allowable crosswind component for landing as derived from technical order (TO) IT-43A-1-1, *Flight Manual--USAF Series T-43A Airplane, Performance Data*, in case an immediate return is required. An alternate takeoff emergency airfield will be used if the crosswind component is greater than maximum allowable.

2.3.2. Landing Minimums. In addition to guidance found in AFI 11-202, Volume 3, *General Flight Rules*, designate an alternate if, for the estimated time of arrival (ETA) (± 1 hour) for the destination airfield, the forecast winds will result in a crosswind component that exceeds the maximum allowable crosswind component for landing (TO IT-43A-1-1).

2.3.3. Alternate Destinations. If two or more suitable alternates are available, aircrews may file flight plans to home field when the terminal weather is forecast to be below published landing minimums. Aircrews will compute divert fuel for the most distant alternate.

2.3.4. Fuel Requirements. If the destination is a remote or island destination, aircrews will have fuel on board to hold for 1 hour and fifteen minutes (1 + 15) at the destination fix in lieu of an alternate. Forecast weather will meet the following restrictions for ETA plus 2 hours:

- 2.3.4.1. The prevailing ceiling and visibility must be at or above the published minimums for an available nonprecision approach (excluding air surveillance radar [ASR]). If a precision approach is available, the ceiling and visibility may be intermittently below nonprecision minimums (excluding ASR), but not below precision approach minimums.
- 2.3.4.2. Do not file to a remote or island destination airfield if the forecast winds will result in a crosswind component that exceeds the maximum allowable crosswind component for landing as derived from TO IT-43A-1-1.

2.4. Adverse Weather:

2.4.1. Do not take off under conditions of freezing rain or severe icing.

2.4.2. During flight, attempt to avoid thunderstorms by at least 20 nautical miles (NM) at or above flight level (FL) 230 or 10 NMs below FL 230. **NOTE:** If necessary (and diverting is not appropriate), approaches or departures may be accomplished when thunderstorms are within 10 NMs. The thunderstorms must not be producing any hazardous conditions (such as hail, lightning, strong winds, gusts fronts, heavy rain, wind shear, or microburst) at the airport, and must not be forecast or observed to be moving in the direction of the route of flight (to include the planned missed approach corridor, if applicable).

2.4.3. Do not fly into an area of known or forecast moderate or greater mountain wave turbulence. Use good judgment when flying into any area conducive to mountain wave turbulence and avoid these areas of potential turbulence when possible.

2.4.4. Flight into areas of forecast or reported freezing rain, severe icing, or severe turbulence is prohibited. Cruising in moderate icing is also prohibited. Base decisions on current weather forecasts, pilot reports (PIREP), and significant meteorological information (SIGMET).

2.5. Briefing and Debriefing:

2.5.1. Accomplish a formal flight briefing for all missions as follows:

2.5.1.1. All aircrew members will attend the briefing unless previously coordinated with unit supervisors. Squadron supervisors will determine the level of briefing required for crew changes after formal briefing.

2.5.1.2. Unit-developed briefing guides may be used to provide the briefer with a reference list of items that may apply to particular missions. Those items understood by all participants may be briefed as "standard."

2.5.2. Mission and events may be modified and coordinated airborne as long as flight safety is not compromised. Missions and events not briefed during the formal flight briefing will not be flown. The aircraft commander will ensure all aircrew members are aware of any changes in mission and events.

2.5.3. Debrief all missions. As a minimum, debrief all mission deviations and unusual occurrences.

2.6. Unit-Developed Aircrew Aids. Units may develop aircrew aids, such as local area guides or in-flight guides. As a minimum, the following items should be included in these aids:

2.6.1. Briefing guides.

2.6.2. Local ultra-high frequency (UHF) channelization.

2.6.3. Appropriate airfield diagrams.

2.6.4. Emergency information (no radio [NORDO] or divert information, etc.).

2.6.5. Cross-country procedures.

2.6.6. Other information as deemed necessary by the unit (for example, stereo flight plans, local training areas, instrument preflight, etc.).

2.7. Flight Data Verification:

2.7.1. Computerized flight plans (CFP) will be verified by the flight crew for route definition and fuel computation accuracy prior to departure.

2.7.2. Compute takeoff and landing data (TOLD) using TO 1T-43-1-1 and (or) TO 1T-43-1CL-1, *Pilots' Abbreviated Flight Crew Checklist--USAF Series T-43A Aircraft*. All TOLD computations should be verified by another qualified T-43 pilot.

2.8. Area Navigation (RNAV). RNAV procedures will only be planned or flown when a qualified navigator is on board and the aircraft is equipped with a fully operational inertial navigation system (INS).

Chapter 3

NORMAL OPERATING PROCEDURES

3.1. Crew Complement. Minimum crew complement for the flight duty period (FDP) is one aircraft commander and one copilot. There are no augmented T-43 crews.

3.2. Interfly Agreement. The operations group commanders (or as specified in MAJCOM supplement) may authorize the interfly of assigned aircrews and (or) aircraft. Normally, interfly should be limited to specific operations, exercises, or special circumstances, but it may be used to relieve short-term qualified manpower shortfalls. Long-term interfly arrangements may be found in command-to-command memorandums of agreement (MOA) or similar-type documents. Headquarters staff or NAF evaluation or inspection teams will have existing interfly arrangements.

3.3. One-Time Flights. If an aircraft has a safety-of-flight condition beyond the immediate or final repair capability of an en route facility, temporary repairs may be made to allow a one-time flight to a pre-selected facility capable of final repair. Aircraft commanders will send their recommendations to the operations group commander through the squadron commander. If a one-time flight is considered feasible, the squadron commander will coordinate with the operations group commander, who has approval authority. Approval will include flight restrictions and designated repair facility.

3.4. Minimum Equipment List (MEL). The 12th Operations Group is responsible for publishing the T-43 MEL. MEL items are operational equipment and systems considered essential for safe flight. MEL items are required for all T-43 operations except as noted under the exceptions/remarks column. "En route" applies to locations where contract maintenance is not available. When the aircraft commander considers an item not covered by this list essential, that item will be treated as if it is included in the table. The listing does not include all of the minimum essential subsystems lists (MESL) required by the maintenance contractor.

3.5. Advisory Calls. Pilots will periodically announce their intentions when flying departures, arrivals, and approaches and when circumstances require deviating from normal procedures.

3.6. Communications Policy. The Air Force does not give a promise of confidentiality to aircrews regarding their recorded aircraft crew communications. Crewmembers are expected to maintain a high degree of cockpit professionalism and crew coordination at all times.

3.6.1. The pilot not flying the aircraft normally makes all air traffic control (ATC) radio calls.

3.6.2. The pilot operating the command radios will inform the other pilot when the primary radio is changed.

3.6.3. One pilot should record and will acknowledge all ATC clearances.

3.6.4. Both pilots will monitor UHF guard (or very high frequency [VHF] guard, when appropriate) emergency frequency regardless of primary radio in use.

3.6.5. Confine message traffic to essential operational matters. Perform a high frequency radio ground check prior to takeoff when the use of high frequency radio may be required for ATC communications. Establish high frequency contact before going out of UHF and VHF range.

3.6.6. Provide the air route traffic control center (ARTCC) position and weather observations when required. If unable to contact an ATC agency, attempt relay through the global high frequency stations.

3.7. Takeoff and Landing Policy. After thoroughly evaluating all conditions (including distinguished visitor [DV] status and comfort level, weather, type of approach to be flown, and crewmember experience), the aircraft commander will determine who will accomplish the takeoff and landing. The aircraft commander will occupy either the left or the right seat during all takeoffs and landings. A qualified aircraft commander will accomplish all approaches and landings under actual emergency conditions unless specific conditions dictate otherwise.

3.8. Communications During Takeoff. If a condition during takeoff arises that would make the takeoff unsafe before reaching the computed V1/Vr (refusal) speed, any qualified pilot will state "ABORT," "ABORT," "ABORT." The takeoff will be discontinued in accordance with the flight manual.

3.9. Runway, Taxiway, and Airfield Requirements. Comply with the following weather and runway limits:

3.9.1. Wind Restrictions. Airfields will be considered below minimums for takeoff and landing when winds (including gusts) are greater than charted values for crosswinds. Crosswind component cannot exceed the maximum charted value derived from TO 1T-43A-1-1 or 1T-43A-1CL-1.

3.9.2. Minimum Runway Length and Width Requirements. The minimum runway length is 5,000 feet or critical field length (CFL), whichever is greater. Minimum runway width is 75 feet. The wing commander or operations group commander may approve intersection takeoffs if operational requirements dictate.

3.9.3. Climatic Conditions. If existing climatic conditions exceed charted values in TO 1T-43A-1-1, takeoff will not be attempted unless additional manufacturer-approved data is provided. For example, the maximum temperature listed on the CFL chart is 50 °C. If the existing temperature is above 50 °C, takeoff data cannot be accurately calculated and takeoff will not be attempted.

3.9.4. Runway Length for Landing. The minimum required runway for landing is landing distance or 5,000 feet, whichever is greater, corrected for runway condition report (RCR) in accordance with the flight manual. Compute landing distance with no reverse thrust.

3.9.5. Overruns. If approach end overruns are available and stressed or authorized for normal operations, they may be used to increase the runway available for takeoff. Departure end overruns (if stressed and authorized) may also be used for landing if needed.

3.9.6. Arresting Cables (Not Including Recessed Cables). When conditions permit (aircraft gross weight, runway length, weather, winds, TOLD, etc.) and the aircraft commander has considered the potential for damaging the aircraft, takeoffs may be made beyond raised cable barriers. Do not land over any raised web barrier (for example, MA-1A, BAK-15).

3.10. Fuel Requirements. This paragraph implements standard minimum fuel requirements. To ensure fuel reserve requirements of AFI 11-202, Volume 3, are met, use the guidance in [Table 3.1](#) when planning fuel for missions.

Table 3.1. T-43 Fuel Planning Chart.

I T E M	A	B
	Fuel Load Component	Requirement
1	Start, taxi, takeoff	1000 pounds.
2	En route (note 1)	Fuel for planned climb and cruise to overhead destination at cruise altitude or initial approach fix altitude.
3	En route reserve	Fuel for 10 percent of flight time.
4	a. Alternate (note 2)	Fuel from overhead destination (include MAP) to the alternate at normal speed and altitude.
	or	
	b. Holding (note 3)	0 + 45 fuel using holding charts at 10,000 feet. When holding in lieu of alternate is required use 1 + 15 holding fuel computed at 20,000 feet.
5	Approach and landing	1,000 pounds.
6	Known holding delays	Fuel for planned holding when delays are anticipated.
7	Missed approach	500 pounds.

NOTES:

1. Include all planned off-course maneuvering for departure or en route deviations.
2. When two alternates are required, compute fuel from the destination to the most distant alternate only.
3. Minimum fuel required over destination or alternate is fuel for holding plus approach and landing or 4,000 pounds, whichever is greater.

3.10.1. Fuel Reserve. Minimum landing fuel for flight planning purposes is 4,000 pounds. Plan initial arrival overhead destination with fuel for holding plus approach and landing or 4,000 pounds, whichever is greater. When dealing with unplanned contingencies, crews will still plan to touchdown with fuel reserve (minimum).

3.10.2. Minimum Fuel. Minimum fuel is 3,000 pounds. Crews will declare minimum fuel whenever they will land with less than 3,000 pounds of fuel remaining.

3.10.3. Emergency Fuel. Emergency fuel is 2,000 pounds. Crews will declare an emergency whenever they will land with emergency fuel or less.

3.10.4. Standard Ramp Load. Units may develop standard ramp loads that meet the minimum local training mission requirements or emergency evacuation requirements (whichever is less). Defueling is not required if required fuel load is less than standard ramp load.

3.10.5. Alternate (or Holding) Fuel. This is fuel for flight from an intended destination to an alternate aerodrome at optimum altitude and normal cruise speed. Compute fuel, time, and altitude from TO 1T-43A-1-1. When holding is required in lieu of an alternate at a remote or island destination, compute holding for 1 + 15 hours, using planned destination gross weight at FL 200. **NOTE:** A

remote or island destination is defined as any aerodrome that, due to its unique geographic location, offers no suitable alternate (civil or military).

3.11. Functional Check Flights (FCF) and Acceptance Check Flights (ACF):

3.11.1. FCFs and ACFs will be performed according to TO 1-1-300 and applicable MAJCOM 21-series (Maintenance) publications. Additional guidance can be found in TOs 00-20-6, *Inspection System, Documentation, and Status Reporting for Ground Activated Missiles and Their Trainers, SE, and Ground C-E Equipment*, and 1T-43A-6CL-1, *Acceptance and Functional Check Flight Checklist T-43A*.

3.11.2. FCFs will normally be conducted in daylight, visual meteorological conditions (VMC). However, the operations group commander may authorize a flight under a combination of visual flight rules (VFR), instrument flight rules (IFR), and "VFR on top" conditions. The flight will begin in VFR conditions. If the aircraft and all systems are operating properly, it may proceed IFR to penetrate cloud cover to VFR on top to continue the altitude phase of the flight.

3.11.3. If a malfunction occurs during an FCF, but is not related to the condition generating the FCF and the original condition operationally checks good, the aircraft may be released for flight.

3.12. Observer. If duties allow, a crewmember will occupy the jump seat anytime the aircraft is below 10,000 feet mean sea level (MSL) to assist in clearing for obstacles and traffic.

3.13. Personal Requirements:

3.13.1. Hearing Protection. Hearing protection should be worn at all times when working around hazardous noise-producing sources, including the flight station and passenger section during many portions of flight.

3.13.2. Reflective Belt. A reflective belt or suitable substitute will be worn on unlit flight lines during hours of darkness or periods of reduced visibility (AFOSH Standard 91-100, *Aircraft Flight Line - Ground Operations and Activities*).

3.13.3. Infant Car Seat (ICS). When children under the age of two are accepted as passengers, their sponsor must provide an approved ICS. Passengers may hand-carry ICSs. ICSs will be secured to a seat, using the seat belt; adults will not hold ICSs during any phase of flight.

3.14. Additional Equipment. In addition to requirements in AFI 11-202, Volume 3, the following flight publications must be carried on each flight: at least one copy of TOs 1T-43A-1, *Flight Manual--USAF Series T-43A Aircraft*, 1T-43A-1-1, 1T-43A-1CL-1, and, when navigators are aboard, at least one copy of TOs 1T-43A-1-2, *Navigator Training Systems Manual--USAF Series T-43A Aircraft*, and 1T-43A-1-2CL-1, *Navigator's Abbreviated Flight Crew Checklist--USAF Series T-43A Aircraft*.

3.15. Cargo Load. The maximum load for the forward and aft cargo compartments is 4,276 pounds at 15 pounds per cubic foot and 2,700 pounds at 10 pounds per cubic foot, respectively.

3.16. Ground Visual Signals. The pilot will ensure no system that could pose any danger to the ground crew is activated before receiving proper acknowledgment from ground personnel. When ground intercom is not used, visual signals will be in accordance with AFI 11-218, *Aircraft Operation and Movement on the Ground*, and this AFI. The crew chief will repeat the given signal when it is safe to operate the system.

3.17. Flight Crew Information File (FCIF) Procedures:

3.17.1. Review FCIF, Volume 1 (index and safety-of-flight files, as a minimum), before all missions or ground aircrew duties. Update the FCIF currency record with the latest FCIF item number, date, and crewmember's initials or as specified.

3.17.2. Crewmembers delinquent in FCIF review or joining a mission en route will receive an FCIF update from a primary aircrew member counterpart on the mission. Instructor pilots who fly with general officers are responsible for briefing appropriate FCIF items.

3.17.3. Crewmembers not assigned or attached to the parent unit operating the mission will certify FCIF review by entering the last FCIF number and their initials behind their name on the file copy of either the flight authorization or their crew orders. This provision will be followed unless an FCIF card is maintained in the mission design series (MDS) squadron.

3.18. AFTO Form 781, AFORM Aircrew/Mission Flight Data Document. Review AFTO Form 781 before applying power to the aircraft or operating aircraft systems. An exceptional release (ER) must be signed before flight. A maintenance officer, maintenance superintendent, or authorized civilian will normally sign the exceptional release. If one of these individuals is not available, the aircraft commander may sign the exceptional release. Ensure the Air Force aviation intro-plane reimbursement (AIR) card or fuel identiplate is inside the AFTO Form 781 or aboard the aircraft.

3.19. Aircraft Servicing and Ground Operations:

3.19.1. Aircraft Refueling. Aircrew members qualified in ground refueling may perform refueling duties. Aircrews will only refuel in cases when maintenance support is not readily available and the mission would be delayed. Crewmembers may augment maintenance refueling teams at en route stops.

3.19.2. Concurrent Ground Operations. Simultaneous refueling or defueling while maintenance operations are being performed is authorized according to TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding (ATOS)*, and will be conducted according to TO 1T-43A-1.

3.20. Crash Position Indicators (CPI) and Emergency Locator Transmitters (ELT). If a CPI or ELT deploys or activates inadvertently, the ATC agency will immediately be notified.

3.21. Passenger Documentation. Ensure passengers are manifested and the required anti-hijacking inspections are performed. When passenger service is not available, leave a passenger manifest with a responsible ground agency prior to takeoff.

3.22. Cabin Security Procedures During Takeoff and Landing. The following procedures should be followed for all takeoffs and landings:

3.22.1. The crew should assure all carry-on luggage and supplies are secured as soon as possible after boarding passengers. Ensure all passenger carry-on baggage is stowed to prevent a hazard during emergency landings; that is, blocking an exit or emergency equipment. Notify the aircraft commander when excessive top side luggage prevents safe stowage.

3.22.2. When passengers are aboard, store all training compartment crash axes out of passenger reach.

3.23. Need for Medical Assistance. When a person aboard the aircraft requires medical care, inform the station of intended landing in sufficient time so medical personnel may meet the aircraft. Include the person's gender, approximate age, and major complaint in the request.

3.24. Night and Marginal Weather Operations. Fly a precision approach, if available, at night or during marginal weather. If a precision approach is not available, fly any available approved instrument approach. For training or evaluations at familiar fields, pilots may fly nonprecision approaches or VFR traffic patterns. The pilot not flying the approach will monitor a precision approach, when available, to enhance safety.

3.25. Flight Data Recorder (FDR) and Cockpit Voice Recorder (CVR). FDR and CVR systems, if installed, should be operative prior to departure and operated continuously from the start of the takeoff roll until the aircraft has completed the landing roll at destination. If en route failure occurs, continue the mission to a station where adequate repairs can be made. If the aircraft is involved in a mishap or incident, open the CVR power circuit breaker after landing and after terminating the emergency.

3.26. Transfer of Aircraft Control. At all times, both pilots of the T-43 must know who has control of the aircraft. Transfer of aircraft control will be made with the statement, "You have the aircraft." The pilot receiving control of the aircraft will acknowledge "I have the aircraft." Once assuming control of the aircraft, the pilot will maintain control until relinquishing it as stated above.

3.27. Closed Traffic Patterns. Initiate the pattern past the departure end of the runway unless directed or cleared otherwise by local procedures or the controlling agency.

3.28. Approach Category. The T-43 is normally Category C for all approaches. When using circling procedures or if an abnormal situation requires, use category minimums appropriate for approach speeds (usually Category D).

3.29. Visual Traffic Patterns. Entry into the visual pattern is normally via a closed pattern or initial. For entry from initial, maintain 250 knots indicated airspeed (KIAS) until the pitch to downwind. Maintain a maximum of 45 degree of bank in the break. Once aircraft operational limits allow, configure them normally. Fly the visual pattern as defined locally.

Chapter 4

TRAINING POLICY

4.1. Qualification Training. This chapter outlines procedures, requirements, and restrictions for qualification, continuation training, and evaluation flights. Joint specialized undergraduate navigator training (JSUNT) will be conducted according to syllabus and local 12th Flying Training Wing directives. Students enrolled in JSUNT on a syllabus mission are not considered passengers.

4.2. Simulated Emergency Flight Procedures:

- 4.2.1. Use a realistic approach and do not compound emergencies.
- 4.2.2. Use radar flight following to the maximum possible, consistent with training objectives.
- 4.2.3. Conduct simulated emergencies only during training and evaluation or currency flights when an instructor or flight examiner pilot is occupying one of the pilot seats.
- 4.2.4. Simulated single-engine maneuvers and no-flap approaches are not authorized at night or in instrument meteorological conditions (IMC).
- 4.2.5. Other simulated emergencies are limited to non-critical phases of flight and will be kept to a minimum during night or IMC.

4.3. Airwork. The following maneuvers are allowed when performed in an approved airwork area or military operating area (MOA) under instructor pilot supervision: **NOTE:** Approved FCFs may accomplish maneuvers required by TO 1T-43A-6, *Scheduled Inspection and Maintenance Requirements--USAF Series T/CT-43A Aircraft (Boeing) T-43A*.

- 4.3.1. Approach to stalls. Straight and level with a clean configuration. Turning (maximum 20 degrees bank) with landing gear down and flap position 15. Straight and level with landing gear down and flap position 40.
- 4.3.2. Manual reversion with A and B flight control switches in STBY RUD and spoiler switches OFF. (Rudder must remain powered.)
- 4.3.3. Steep turns (maximum 60 degrees bank).
- 4.3.4. Unusual attitudes (maximum 60 degrees bank and 30 degrees pitch).

4.4. Touch-and-Go Landing Limitations:

4.4.1. Touch-and-go landings may be performed only if an instructor pilot occupies a seat with a set of flight controls. Current and qualified instructor pilots are authorized to conduct or supervise touch-and-go landings under the following conditions:

- 4.4.1.1. The maximum crosswind component is 25 knots or maximum charted value, whichever is less.
- 4.4.1.2. The standard runway length for a flaps 15 (flaps reset to 5) touch-and-go landing is 8,500 feet or twice the computed landing distance, whichever is greater. The standard runway length required for a touch-and-go landing with flaps 30/40 (reset to 15) or flaps 15 (flaps not reset) is 8,000 feet or twice the landing distance, whichever is greater.

4.4.2. The instructor pilot will brief what reconfiguration will take place and which pilot will perform the reconfiguration. The instructor will also brief the abort procedures.

4.4.3. Other restrictions are as follows:

4.4.3.1. Reported ceiling and visibility values are at least at the lowest compatible approach.

4.4.3.2. Wet runway or RCR must be a measured 9 or higher.

4.4.3.3. Do not accomplish touch-and-go landings on slush covered runways.

4.4.3.4. Do not place the throttles in reverse during a touch-and-go landing. Do not practice rejected takeoffs.

4.4.4. Stop-and-go-landings are not authorized. (This does not prevent a full stop and taxi back to number one position.)

4.5. Engine-Out Limitations:

4.5.1. Simulated engine failure is not authorized at less than engine-out minimum control speed as published in the flight manual, when actual emergency condition exists, or during no-flap approach and landing. Landings may be performed with one thrust lever in idle. Simulated engine failure will not be initiated below 150 feet above ground level (AGL).

4.5.2. Pilots will not practice simulated engine-out maneuvers in the aircraft unless an instructor or flight examiner pilot is occupying one of the pilot seats.

4.6. Training Maneuver Limitations. Adhere to the restrictions in [Table 4.1](#) on all training flights and FCFs.

4.7. Operating Limitations. Unless specifically authorized elsewhere in this chapter, do not practice emergency procedures that degrade aircraft performance or flight control capabilities. In an actual emergency, terminate all training and flight maneuvers practice. Training should be resumed only when the pilot in command determines it is safe.

4.8. Simulated Instrument Flight. Artificial vision-restricting devices are not authorized for any phase of flight. Simulated instrument flight may be flown and logged without the use of a vision-restricting device.

Table 4.1. In-Flight Maneuver Restrictions.

I T E M	A	B	C
	Maneuver	Altitude Restrictions	Other Restrictions
1	Actual engine shutdown	5,000 feet AGL minimum	Do not practice actual engine shutdown unless for an FCF or FCF training flight or upgrade syllabus item (day, VMC only).
2	Any simulated emergency on takeoff	Initiate above 500 feet AGL	VMC.

I T E M	A	B	C
	Maneuver	Altitude Restrictions	Other Restrictions
3	Simulated engine-out approach and (or) go-arounds	Initiate at or above 150 feet AGL	In the event of a go-around below 150 feet AGL, use all engines (day, VMC only).
4	Steep turns	5,000 feet AGL minimum	Day, VMC only.
5	Approach to stalls and unusual attitudes	10,000 feet AGL minimum	Day, VMC only.

Chapter 5

ABNORMAL OPERATING PROCEDURES

5.1. Aircrew Responsibility. The pilot in command will accomplish all approaches and landings under actual emergency conditions unless specific conditions dictate otherwise.

5.2. Takeoff Aborts:

5.2.1. If an abort occurs during takeoff roll, give the call sign and state intentions when practical.

5.2.2. When aborting, if hot brakes are suspected, declare a ground emergency. Taxi the aircraft to the designated hot brake area and follow hot brake procedures.

5.3. Air Aborts. Regardless of apparent damage or subsequent normal operation, the mission will be aborted for any of the following reasons: bird strike or foreign object damage, flight control system anomalies, or engine flameout, stagnation, or shutdown.

5.4. In-Flight Practice of Emergency Procedures:

5.4.1. A simulated emergency procedure is a procedure that produces an effect that would closely parallel the actual emergency, such as retarding the throttle to a degree that produces a drag equivalent to an engine flameout or an engine with the throttle in idle.

5.4.2. All simulated emergency procedures will be thoroughly briefed and announced before execution. The aircraft must remain clear of clouds if asymmetric thrust is used during simulated emergencies.

5.4.3. Compound or multiple simulated emergencies are prohibited; for example, a simulated engine failure in addition to a simulated "A" hydraulic system failure.

5.4.4. Do not deactivate systems during simulated systems malfunctions. That is, engines will not be shut down and hydraulic systems and flight control switches will remain ON (except during manual reversion demonstrations accomplished during airwork as described in [Chapter 4](#)).

5.4.5. All practice and (or) training related to aborted takeoffs will be accomplished in the flight simulator, cockpit familiarization trainer (CFT), or static aircraft.

5.5. Prohibited Maneuvers. In addition to those maneuvers listed in TO 1T-43A-1, the following maneuvers are prohibited: (**NOTE:** An approved FCF may accomplish maneuvers required by TO 1T-43A-6.)

5.5.1. Attitudes greater than 20 degrees pitch (up or down) or bank angles greater than 45 degrees, unless performed in accordance with maneuvers described in [Chapter 4](#)).

5.5.2. Practice in-flight engine shutdowns.

Chapter 6

LOCAL OPERATING PROCEDURES

6.1. Use of This Chapter. This chapter is reserved for unit local operating procedures. If this chapter is incorporated in another base publication (instruction, supplement, etc.), a single page insert will be used referencing its location or the entire publication will be inserted, as appropriate.

6.2. Guidance. Procedures herein will not be less restrictive than those contained elsewhere in this instruction, nor is this chapter intended to be a single source document for procedures contained in other directives or instructions. Unnecessary repetition of guidance provided in other established directives should be avoided. However, reference to those directives is acceptable when it serves to help locate information necessary for local operating procedures.

6.3. Publications Approval Channels and Format. This chapter is authorized to be issued to each T-43 aircrew. MAJCOMs or other subordinate agencies (NAFs, wings, etc.) may direct publications approval channels and a specific format for **Chapter 6** based on unique flying areas, missions, and (or) procedures. Unless changed by MAJCOM or subordinate agency, the procedures in paragraph **6.4.** apply.

6.4. Procedures for Publishing. When publishing **Chapter 6**, units will forward one copy each to the MAJCOM and appropriate subordinate agencies who will review it and return their comments or required changes back to the units, as appropriate. The process need not delay publishing unless specified otherwise by the MAJCOM or subordinate agency.

6.5. Organization of Chapter 6. The local **Chapter 6** will be organized in the following format and will include, but not be limited to, the following information:

- 6.5.1. Section A. Introduction.
- 6.5.2. Section B. General Policy.
- 6.5.3. Section C. Ground Operations.
- 6.5.4. Section D. Flying Operations.
- 6.5.5. Section E. Abnormal Procedures.
- 6.5.6. Attachments and Illustrations.

6.6. Procedures for Inclusion. This chapter will include procedures for the following, as applicable:

- 6.6.1. Command and control.
- 6.6.2. Fuel requirements.
- 6.6.3. Diversion instructions.
- 6.6.4. Local weather procedures.

6.6.5. Unit standards (optional).

6.6.6. Cross-country procedures (if applicable).

MARVIN R. ESMOND, Lt General, USAF
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Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

Federal Aviation Regulation (FAR)

DoD Flight Information Publication (FLIP)

AFPD 11-2, Aircraft Rules and Procedures

AFI 11-202, Volume 1, Aircrew Training

AFI 11-202, Volume 3, General Flight Rules

AFI 11-218, Aircraft Operation and Movement on the Ground

AFI 11-401, Flight Management

AFMAN 37-139, Records Disposition Schedule

AFOOSH Standard 91-100, Aircraft Flight Line – Ground Operations and Activities

TO 00-20-6, Inspection System, Documentation, and Status Reporting for Ground Activated Missiles and Their Trainers, SE, and Ground C-E Equipment

TO 00-25-172, Ground Servicing of Aircraft Grounding/Bonding (ATOS)

TO 1-1-300, Acceptance/Functional Check Flight and Maintenance Operational Checks

TO 1T-43A-1-1, Flight Manual--USAF Series T-43A Aircraft, Performance Data

TO 1T-43A-1, Flight Manual--USAF Series T-43A Aircraft

TO 1T-43A-1-2, Navigator Training Systems Manual--USAF Series T-43A Aircraft

TO 1T-43A-1CL-1, Pilots' Abbreviated Flight Crew Checklist--USAF Series T-43A Aircraft

TO 1T-43A-2-1, Organic (Flightline) Maintenance Instructions-Generator Airplane (Boeing) T-43A

TO 1T-43A-2CL-1, Navigator's Flight Crew Checklist--USAF Series 1T-43A Airplane

TO 1T-43A-6, Scheduled Inspection and Maintenance Requirements--USAF Series T/CT-43A Aircraft (Boeing) T-43A

TO 1T-43A-6CL-1, Acceptance and Functional Check Flight Checklist T-43A

Abbreviations and Acronyms

ACF—acceptance check flight

AGL—above ground level

ARTCC—air route traffic control center

ASR—air surveillance radar

CFL—critical field length

CFP—computerized flight plans

CFT—cockpit familiarization trainer
CVR—cockpit voice recorder
DO—director of operations
ER—exceptional release
FCF—functional check flight
FCIF—flight crew information file
FDP—flight duty period
FDR—flight data recorder
FL—flight level
FLIP—flight information publication
ICAO—International Civil Aviation Organization
ICS—infant car seat
IFR—instrument flight rules
IMC—instrument meteorological condition
INS—inertial navigation system
JSUNT—joint specialized undergraduate navigator training
KIAS—knots indicated airspeed
MAP—missed approach point
MDA—minimum descent altitude
MDS—mission design series
MEL—minimum equipment list
MESL—minimum essential subsystems list
MOA—memorandum of agreement
MOA—military operating area
MSL—mean sea level
NAF—numbered Air Force
NM—nautical mile
NORDO—no radio
PIREP—pilot report
RCR—runway condition report
RNAV—area navigation
stan/eval—standardization/evaluation

TMC—training mission commanders

TO—technical order

TOLD—takeoff and landing data

UHF—ultra-high frequency

VFR—visual flight rules

VHF—very high frequency

VMC—visual meteorological condition

Terms

NOTE:

The explanation or definition of terms and abbreviations commonly used in the aviation community can be found in the *FAR*, Part 1, and *DoD FLIP*, General Planning (Chapter 2).

Air traffic control (ATC)—A service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.

Estimated time of arrival (ETA)—Same as estimated block-in time. Landing time is different than ETA.

Estimated time of departure (ETD)—Same as estimated block-out time. Takeoff time is different than departure time.

Familiar field—An airport at which unit assigned aircraft routinely perform transition training. Each operations group commander will designate familiar fields within his or her local flying area. See [Chapter 6](#) for approved fields and limitations.

Local training mission—A mission scheduled to originate and terminate at home station, generated for training or evaluation, and executed at the local level.

Overwater flight—Any flight that exceeds power-off gliding distance from land.

Significant Meteorological Information (SIGMET)—An area weather advisory issued by an International Civil Aviation Organization (ICAO) meteorological office relayed to and broadcast by the applicable ATC agency. SIGMET advisories are issued for tornadoes, lines of thunderstorms, embedded thunderstorms, large hail, severe and extreme turbulence, severe icing, and widespread dust or sand storms. SIGMETs frequently cover a large geographical area and vertical thickness. They are prepared for general aviation and may not consider aircraft type or capability.